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## ***Bryocamptus yohteiensis*, a New Harpacticoid Copepod (Crustacea) from Hokkaido, Japan**

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A new species of harpacticoid copepod, *Bryocamptus yohteiensis*, is described. Specimens of this new species were collected from puddles on the streamside of a willow grove in Kutchan, located on the north of Mt. Yohte in Hokkaido, Japan. The species is close to *B. umiatensis* Wilson, 1958 known from Alaska, Kamchatka, and Sakhalin Island. This is the seventh species of the genus reported from Japan.

**Key Words:** Faunistics, Copepoda, Japan.

### **Introduction**

In the spring of 1994, collections were made in several microhabitats at the foothill of Kutchan district on the north of Mt. Yohte in Hokkaido, Japan. A sediment sample collected from the puddles on the streamside of a willow grove was found to contain a new species of *Bryocamptus*. Successive collection from the same site, in the fall of the same year, yielded several additional specimens including a male. This is the seventh species of the genus from Japan.

All drawings were made with the aid of a drawing tube. The habitus was drawn with the specimens in glycerine and the dissected parts and appendages were mount in gum-chloral medium. Body lengths were taken from the anterior rim of the rostrum to the end of the caudal rami. Specimens have been deposited in the Department of Zoology, National Science Museum, Tokyo (NSMT) and the U. S. National Museum of Natural History, Smithsonian Institution (USNM).

Order **Harpacticoida** Sars, 1903

Family **Canthocamptidae** Sars, 1906

Genus ***Bryocamptus*** Chappuis, 1928

***Bryocamptus yohteiensis***, new species  
(Figs 1-3)

**Types.** Holotype: ♀, dissected and mounted on a slide, NSMT-Cr 11750. Paratypes: 2 ♀ ♀, dissected and mounted on 2 slides, NSMT-Cr 11751 and 11752. All from streamside puddles, Kutchan, Hokkaido, 42°57.0'N 140°51.7'E, 7 June 1994. One male, dissected and mounted on a slide, NSMT-Cr 11753, and 5 ♀ ♀ preserved in 70% ethanol, collected from same locality, 5 October 1994, USNM 274220.

**Description.** Female: Body (Fig. 1a) fusiform. Length of holotype 0.52mm; range and mean of 7 paratypes, 0.53-0.58mm and 0.55mm. Rostrum short and blunt. Hyaline fringes of all somites smooth. Genital double somite (Fig. 1c) with row of spinules near posterolateral margin, spinules on dorsal half small and those on ventral half large. Two abdominal somites with large lateral spinules and small

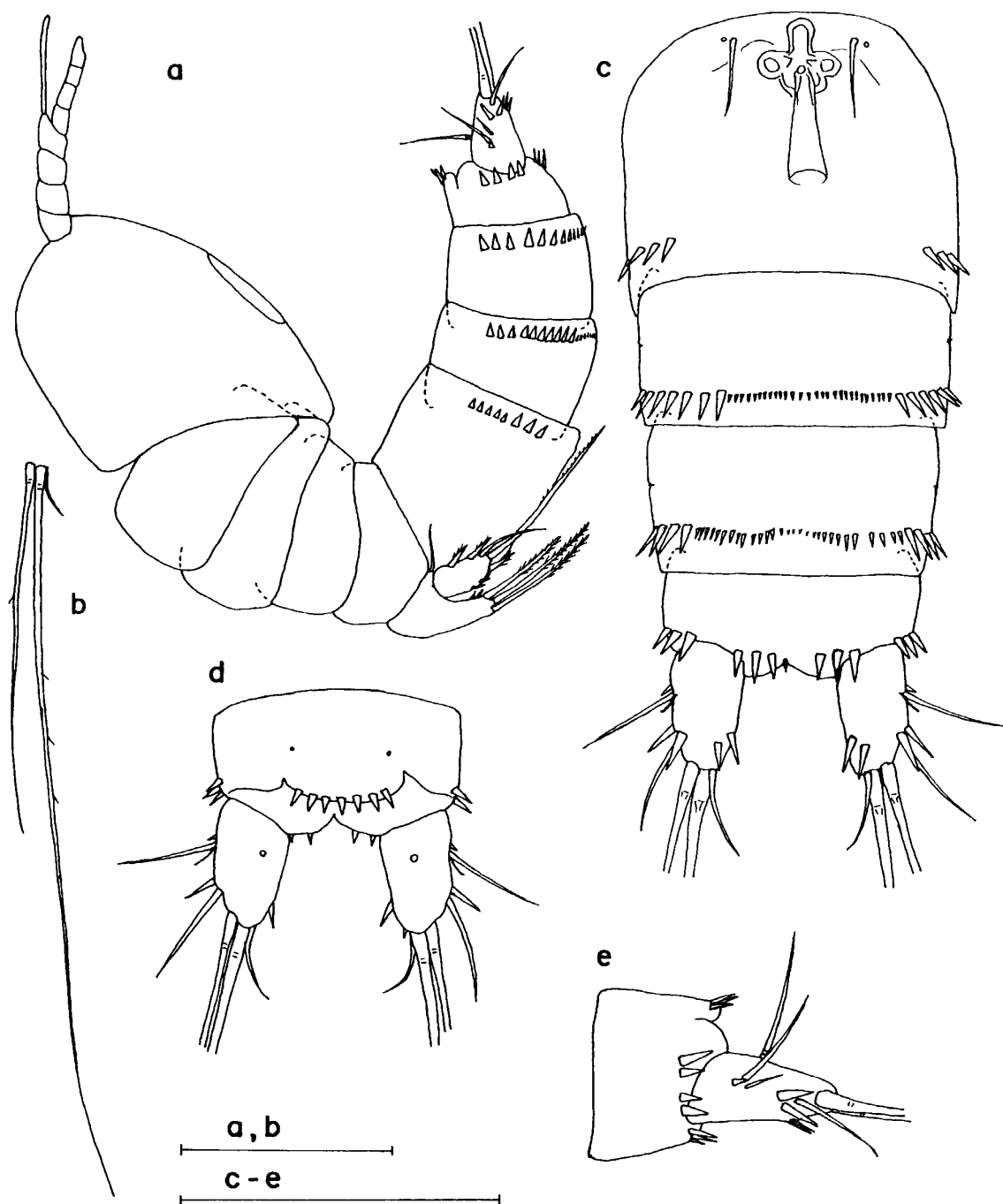


Fig. 1. *Bryocamptus yohteiensis* n. sp., female, holotype: a, habitus, lateral; b, terminal setae of left caudal ramus; c, genital double somite and abdomen, ventral; d, anal somite and caudal rami, dorsal; e, anal somite and caudal ramus, lateral. Scales = 100  $\mu$ m.

ventral spinules (Fig. 1a, c). Anal somite (Fig. 1a, c-e) with row of large spinules on lateral and posteroventral border. Anal operculum convex, with 7 marginal denticles, (6 and 7 in 2 paratypes). Caudal rami (Fig. 1c-e) slightly divergent, and subrectangular, about 1.8 times longer than wide; dorsally directed seta inserted at anterior third; anterior third of lateral surface of ramus with seta, setule and spinule; posterior third with seta and 2 large spinules; and distal margin with 2 medioventral spinules. Length of middle terminal seta equal to that of abdomen, and about 2 times longer than outer seta; inner terminal seta shorter than ramus (Fig. 1b). Copulatory pore (Fig. 1c) at posterior two-fifths of genital double somite.

Antennule (Fig. 2a) 8-segmented, with ethsetasc on segment 4 past beyond tip of terminal segment. Exopodite of antenna (Fig. 2b) 2-segmented, proximal segment with seta and fine spinules on distal margin, terminal segment with 3 setae. Mandibular palp (Fig. 2c) 2-segmented, proximal segment unarmed, distal segment with 1 lateral seta, and 4 apical setae.

Swimming legs 1-4 (Fig. 2d-g) with 3-segmented rami, except for endopodite of leg 4 which is 2-segmented. Setation formula for armament as follows:

|       | Basis | Exopodite         | Endopodite     |
|-------|-------|-------------------|----------------|
| Leg 1 | I-1   | I-0; I-1; II,2,0  | 0-1;0-1; I,1,1 |
| Leg 2 | I-0   | I-0; I-1; III,2,1 | 0-1;0-1; I,2,1 |
| Leg 3 | I-0   | I-0; I-1; III,3,1 | 0-1;0-1; I,2,2 |
| Leg 4 | I-0   | I-0; I-1; III,3,1 | 0-1; I,2,2     |

Intercoxal plate of leg 1 with row of fine spinules on each side; that of leg 2 with one or two spinules on each side; those of legs 3 and 4 unarmed.

Leg 5 (Fig. 2h) with inner expansion of baseoendopod reaching distal end of exopodite and bearing 4 spines; distal end of both inner and outer margin bearing 2 spinules; exopodite about 1.7 times longer than wide, bearing 5 spines and 2 inner spinules.

Male: Body 0.43mm long and resembling female. Genital somite with 3 spinules on posterolateral margin; 1st and 2nd abdominal somites each with 1 row of large spinules from posterolateral to ventral margin, and 3rd abdominal somite those of with row of smaller spinules and a break in midventral (Fig. 3a, b). Anal somite and caudal rami as in female. Anal operculum with 6 denticles. Antennule geniculate, 8-segmented and armed as shown in Fig. 3c, d.

Both rami of leg 1 and exopodites of legs 2-4 as in female; endopodites of leg 2 and leg 3 2-segmented and appeared as shown in Fig. 3e and 3f, respectively. Proximal segment of leg 4 endopodite (Fig. 3g) without inner seta and distal segment bearing only 1 seta on inner margin. Leg 5 (Fig. 3h) exopodite oval, about 1.7 times longer than wide, and armed with 6 spines; inner expansion of baseoendopod reaching midlength of exopodite, with 2 spines apically and 1 spinule on medial edge.

**Etymology.** Named after its locality Mt. Yohte.

**Affinities.** The new species is close to *B. umiatensis* Wilson, 1958, which was described from Alaska, and known also from Sakhalin Island (Ishida and Kobayashi, 1992), and the east coast of the Kamchatka Peninsula (Ishida, unpublished). The legs 1-4 on the female of the new species are the same as those in *B. umiatensis*. However,

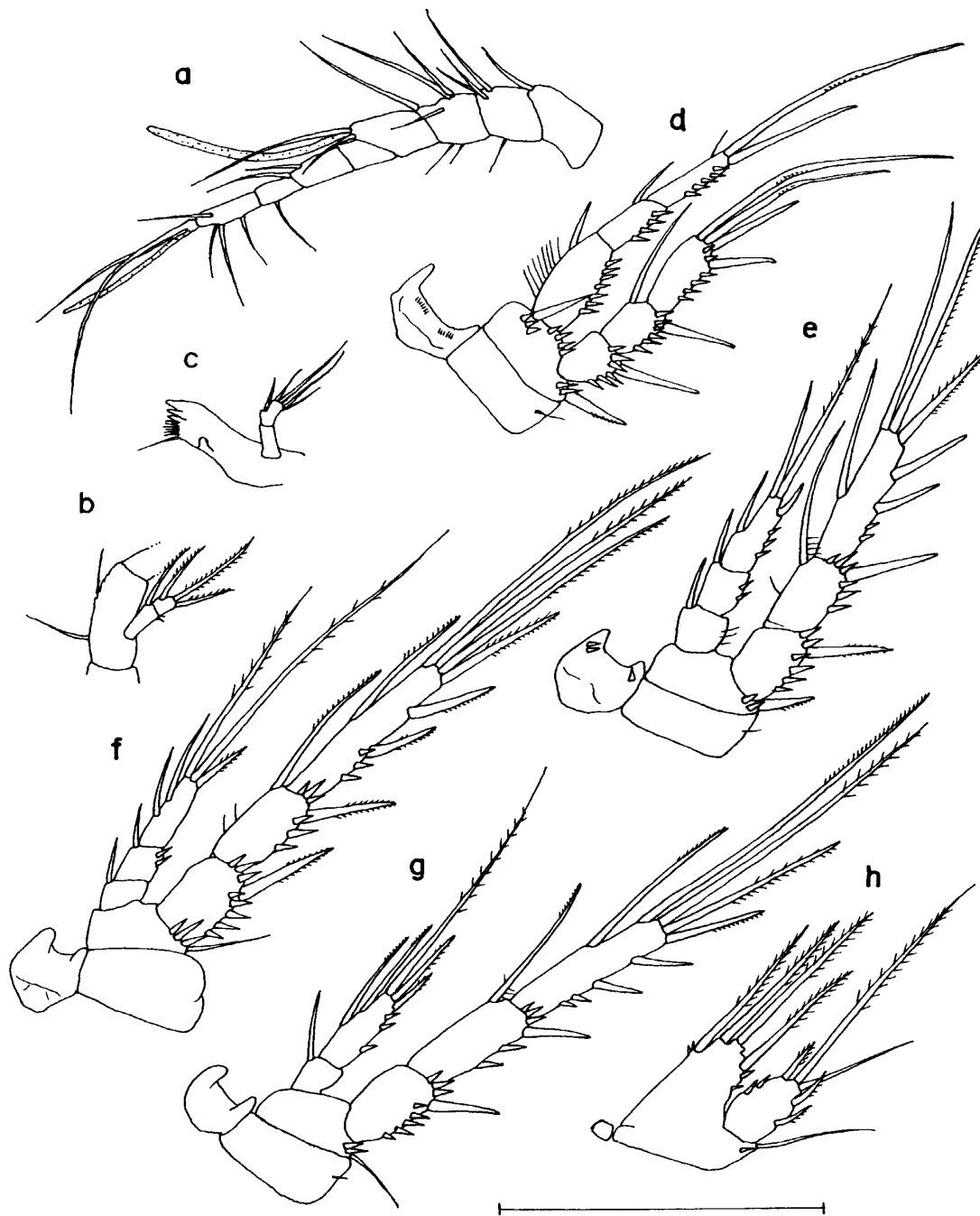


Fig. 2. *Bryocamptus yohteiensis* n. sp., female, holotype: a, antennule; b, exopodite of antenna; c, mandible; d, leg 1 and coupler, anterior; e, leg 2 and coupler, anterior; f, leg 3 and coupler, anterior; g, leg 4 and coupler, anterior; h, leg 5 and coupler, anterior. Scale = 100  $\mu$ m.

there are distinct differences between the two species. The significant diagnostic features of the female of the new species are: (1) the absence of row of spinules at midlength of the genital double somite; (2) the dorsally directed seta of the caudal ramus located at anterior third of the ramus (versus at posterior fourth); (3) the armature of only 3 and 2 spinules respectively on each posterior medioventral border

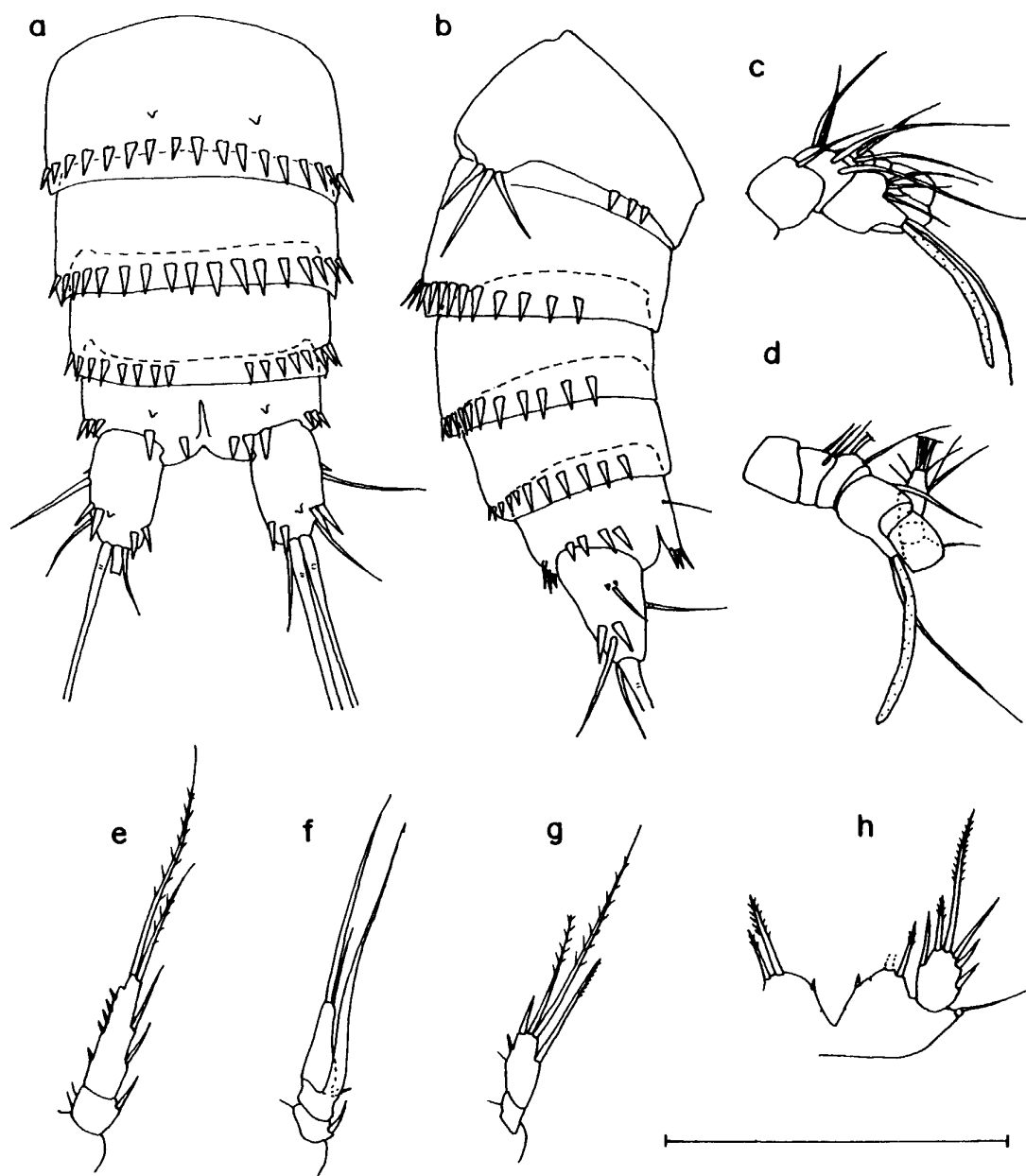


Fig. 3. *Bryocamptus yohteiensis* n. sp., male, paratype: a, abdomen ventral; b, genital somite and abdomen, lateral; c, left antennule, ventral; d, right antennule, dorsal; e, leg 2 endopodite; f, leg 3 endopodite; g, leg 4 endopodite; h, leg 5. Scale = 100  $\mu$ m.

of the anal somite and distal medioventral corner of the caudal ramus (versus more than 10, and about 5, respectively). The male of the new species differs in having straight normal type of setae on the terminal segment of leg 3 endopodite. Also, in the male of *B. umiatensis*, the modified seta is about as long as the endopodite, stout at base and split terminally into 2 apical processes (Wilson 1958; Wilson and Yeatman 1959). *Bryocamptus tarnogradskyi* Borutskii, 1934 is an Eurasian species allied with *B. yohteiensis*. This species differs from the new species in having a short, nearly quadrate caudal ramus, and a larger body (0.80mm in length) (Borutskii

1934, 1952).

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